

DIGITAL MARKETING LAB

Corso di laurea magistrale in
Data Science

a.a. 2018/2019

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```
mirror_mod.use_x = False
mirror_mod.use_y = True
mirror_mod.use_z = False
elif operation == "MIRROR_Z":
    mirror_mod.use_x = False
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#selection at the end add back the deselected mirror modifier object
mirror_ob.select= 1
modifier_ob.select=1
bpy.context.scene.objects.active = modifier_ob
print("Selected" + str(modifier_ob)) # modifier ob is the active ob
#mirror_ob.select = 0
```

PIPELINE

Cleaning raw data

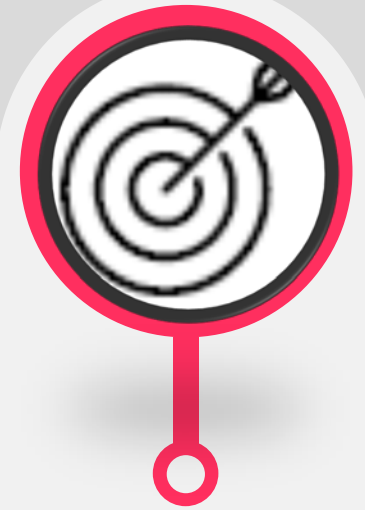
Evaluation



Business questions



Modelling



Data Driven Actions

BUSINESS QUESTIONS



- ✓ **Propensity of email engagement:** un consumatore risponderà prontamente ad una specifica campagna email?
- ✓ **Propensity to churn:** un consumatore sceglie di abbandonarci?
- ✓ **Time series model:** previsione delle vendite future

PROPENSITY OF EMAIL ENGAGEMENT



Algoritmi implementati:

1. Decision tree
2. Random Forest
3. XGBoost
4. Naive Bayes
5. TAN (Bayesian method)



CLASS IMBALANCE PROBLEM



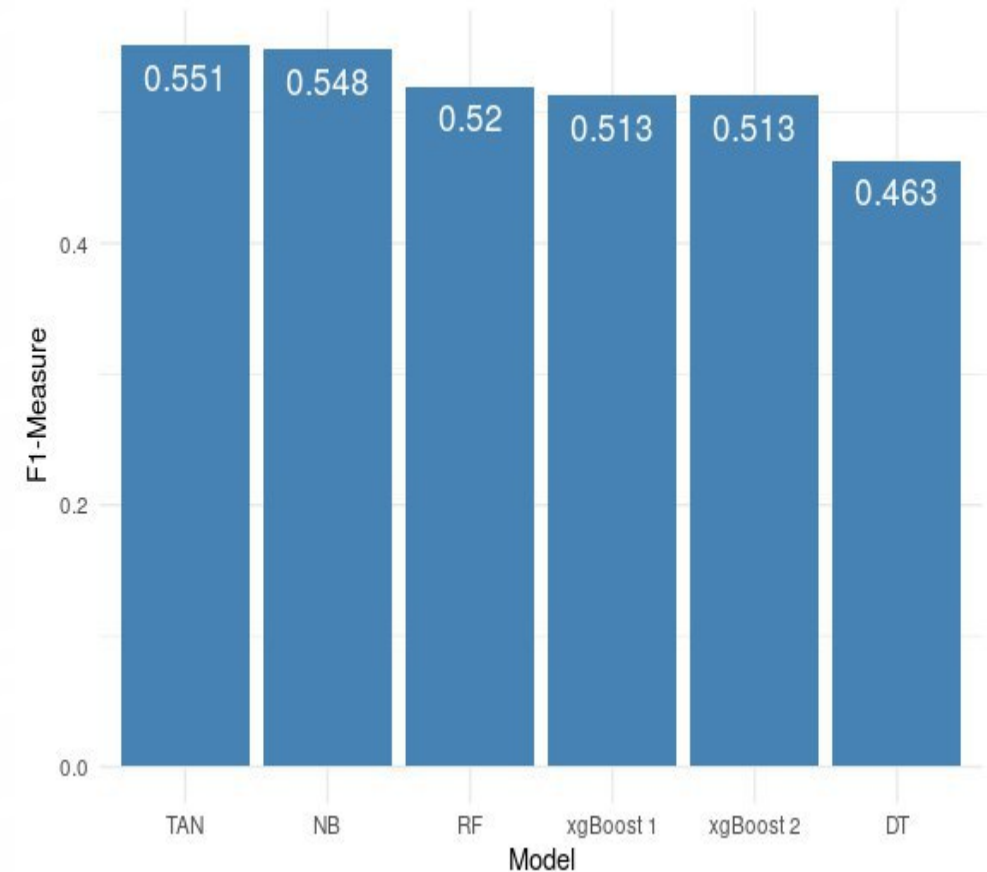
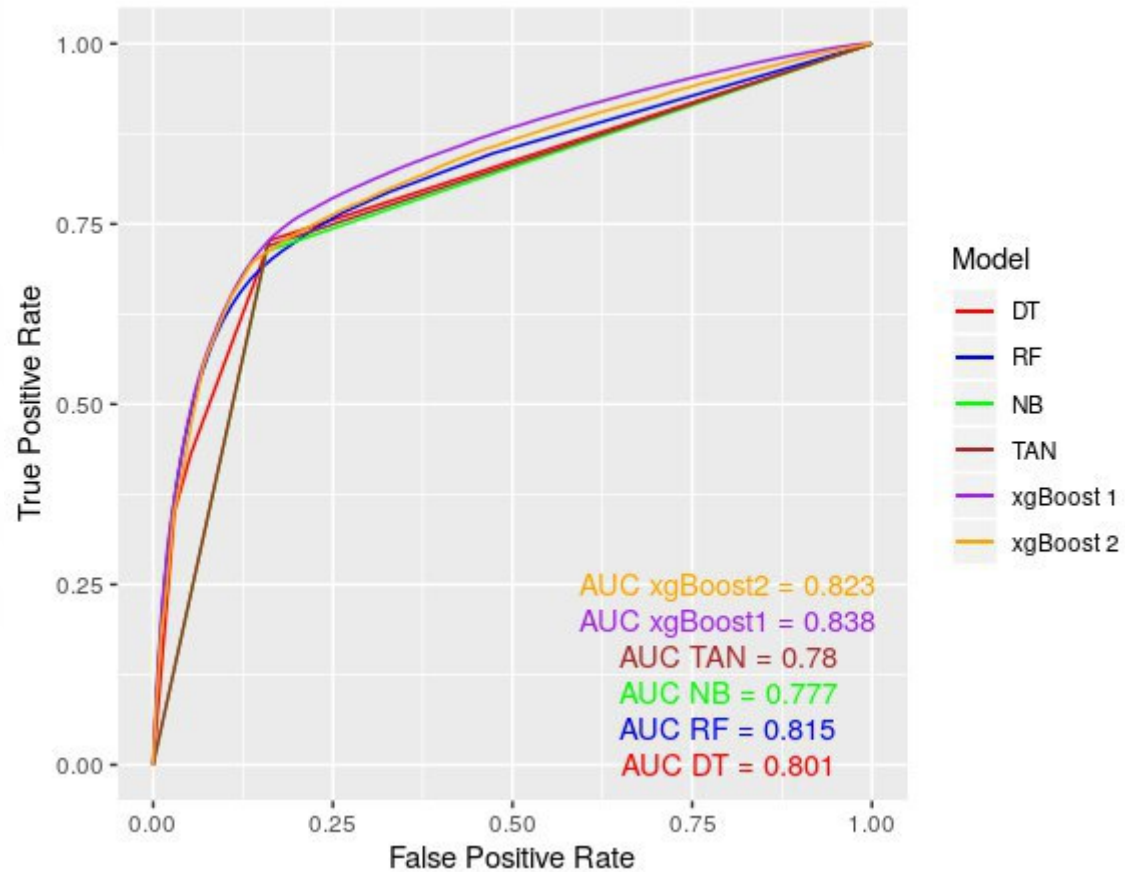
85%



15%

EVALUATION

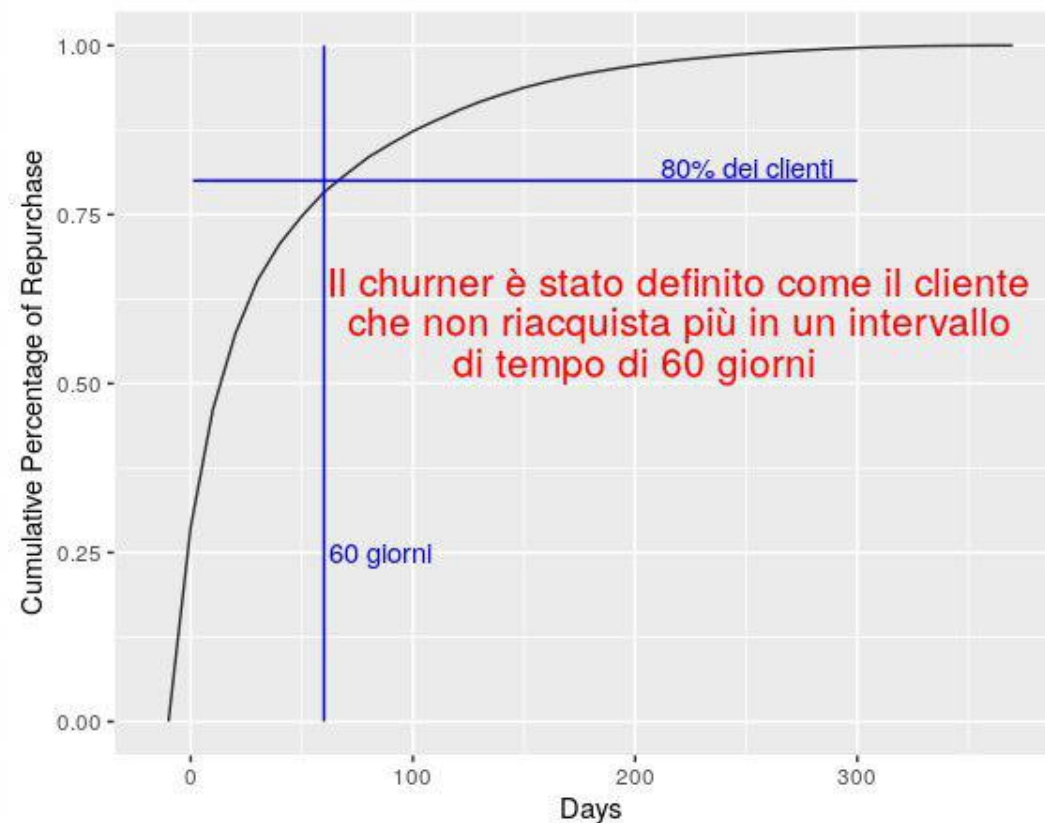
Per valutare l'algoritmo migliore è stata utilizzata la curva ROC ed F-measure



PROPENSITY TO CHURN

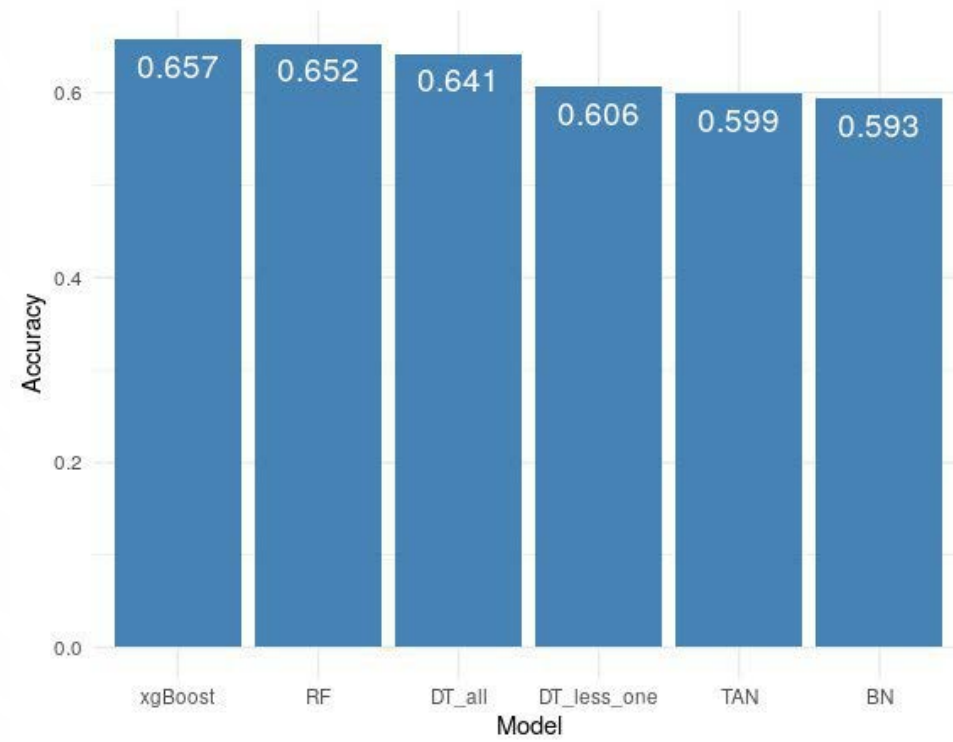
Algoritmi implementati:

1. Decision tree
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4. Naive Bayes
5. TAN (Bayesian method)



EVALUATION

Per valutare l'algoritmo migliore è stata utilizzata l'Accuracy

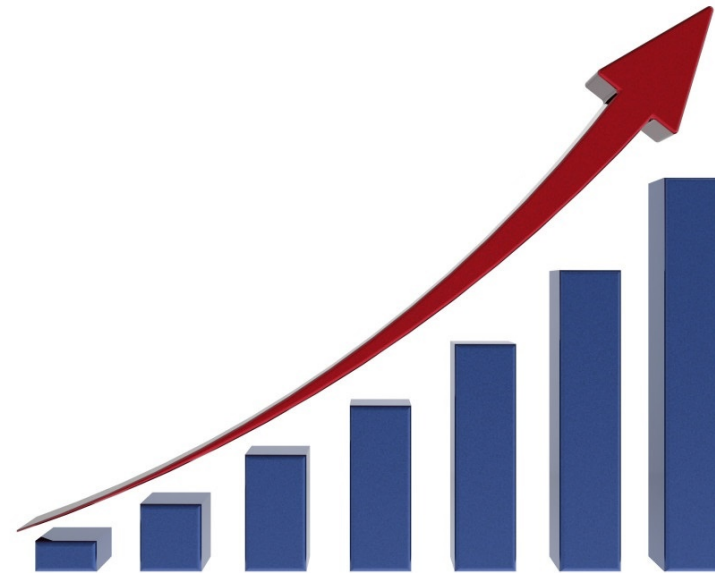


TIME SERIES MODEL

Algoritmi implementati:

1. ARIMA

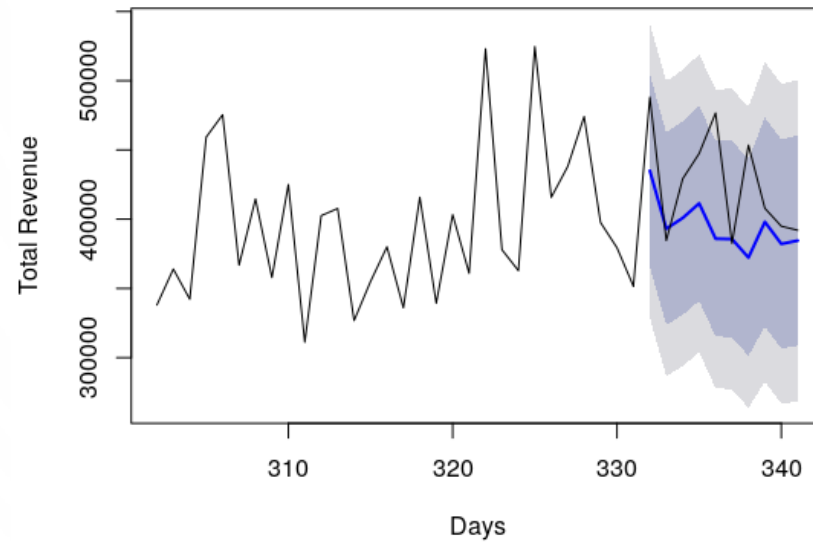
2. LSTM



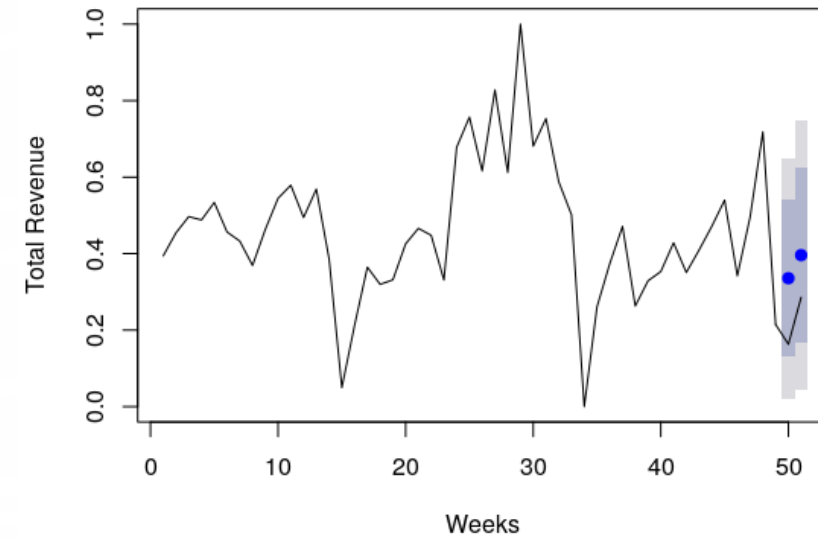
PREDICTION

ARIMA

Daily Forecast

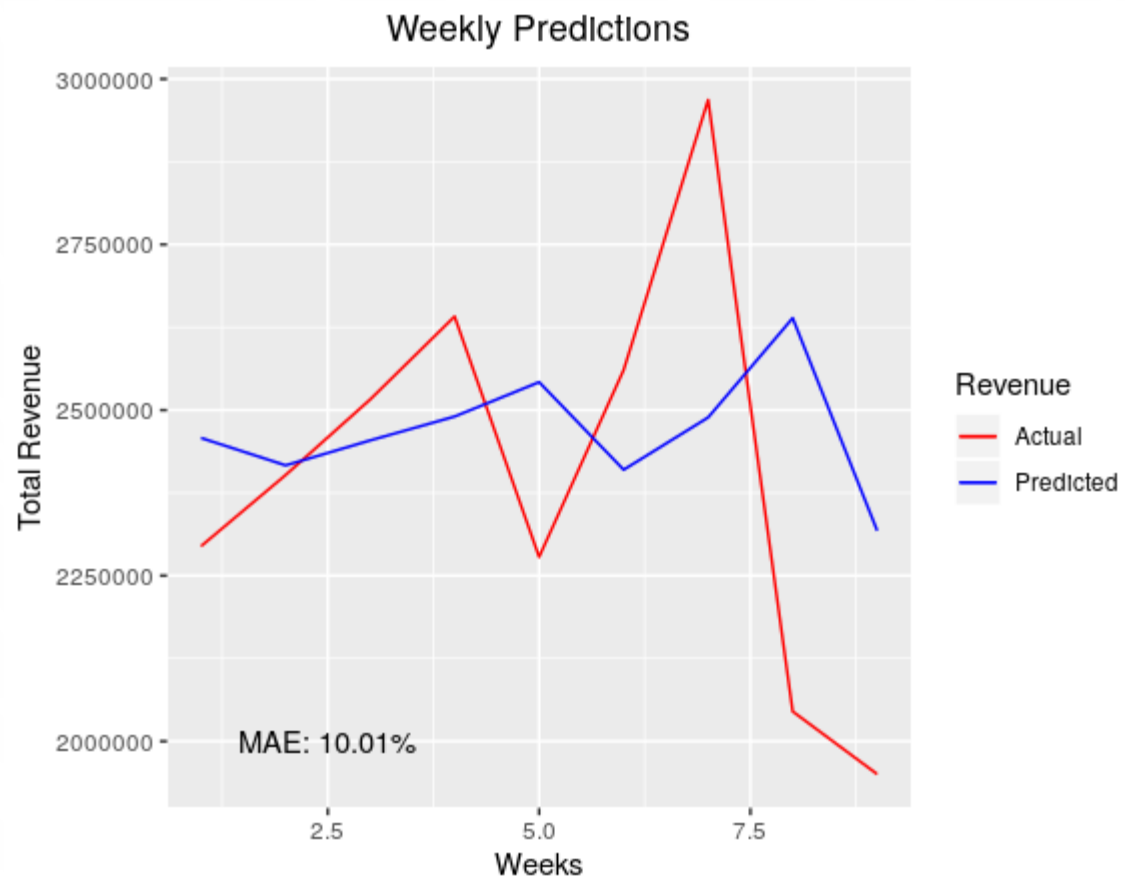


Weekly Forecast



PREDICTION

LSTM



DATA DRIVEN ACTIONS

- Attuare strategie di Real Time marketing: intercettare soluzioni rapide ed efficaci
- Creare relazioni personalizzate: ideazione di campagne multi-canale, volte al mantenimento o riacquisizione di clienti
- Ottimizzazione dei processi per migliorare l'efficacia delle azioni in modo continuativo
- Creare contenuti di qualità che rispondano agli interessi e alle necessità dei clienti



GRAZIE PER L'ATTENZIONE

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```

```
#mirror_obj.select = 0 # groups, first time if (nsize <= 1) compress(1)
```

```
free = low_context->selected_object[0]; blocks[0] = groupinfo->smallblock;
small_block;
```

```

    if (i == 0)
        cout << "else 1" << endl;
    else if (i == 1)
        cout << "else 2" << endl;
    else if (i == 2)
        cout << "else 3" << endl;
    else if (i == 3)
        cout << "else 4" << endl;
    else if (i == 4)
        cout << "else 5" << endl;
    else if (i == 5)
        cout << "else 6" << endl;
    else if (i == 6)
        cout << "else 7" << endl;
    else if (i == 7)
        cout << "else 8" << endl;
    else if (i == 8)
        cout << "else 9" << endl;
    else if (i == 9)
        cout << "else 10" << endl;
    else
        cout << "else 11" << endl;
}

```

```
for (i = 0; i < blocks; i++) {
    fprintf(stdout, "group %d: %d\n", i, 1);
}
```



gato autismo parcial sili

```
graph LR; 3 --- 2; graphInfo.blocks[1] = 3;
```

Figure 1. Schematic diagram of the experimental setup.

```
return group_info;
```

outgoing partial alloc